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GIVE YOUR WHITE PINE A CHANCE



CONTROL BLISTER RUST

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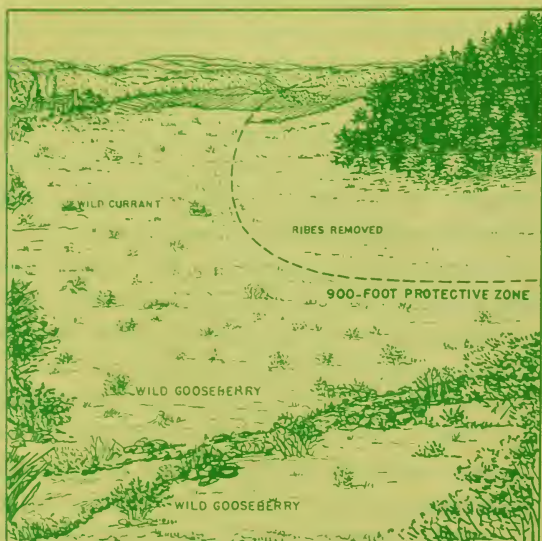
**BUREAU OF ENTOMOLOGY
and PLANT QUARANTINE**

Agricultural Research Administration

U.S. DEPARTMENT of AGRICULTURE

This publication was prepared by
the Division of Plant Disease Control,
for use in the Southern Appalachian
Blister Rust Control Region.

WHITE PINE is the most valuable softwood in the southern Appalachians. It is increasing in abundance, and with adequate protection and management should become of much greater importance in the future as a lumber-producing species in this region. These trees are attacked by blister rust, an introduced fungus disease that threatens their destruction. Control of this disease is carried on cooperatively by Federal, State, and private agencies in all sections of the country where these trees are commercially important.



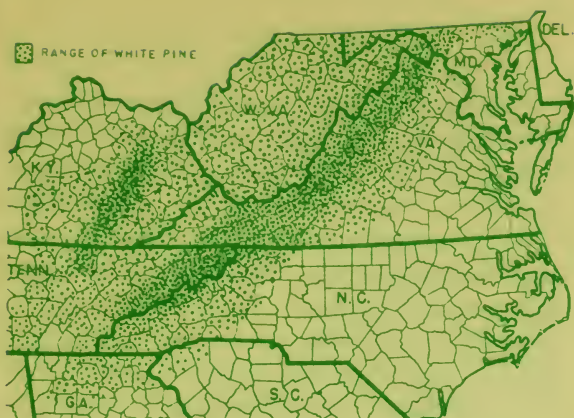
White pines protected by removal
of ribes within 900 feet

How Blister Rust Kills White Pine

Blister rust spreads from infected currant and gooseberry plants, known as ribes, to white pine trees by means of wind-borne spores. The disease cannot spread from pine to pine. One large ribes plant could infect the pine trees in an area of about 50 acres. The fungus kills by girdling the branches and trunks of pine trees. The younger trees are killed in a short time, and thus the natural restocking of forest areas is prevented.

Timber Value of White Pine

There is enough white pine now growing on more than 3 million acres of land in this region to produce profitable crops of timber at maturity. The best white pine occurs in the Blue Ridge, Allegheny, Cumberland, and Great Smoky mountain ranges. Some of this timber remains, but most of it has been cut. The harvest varies considerably over the years. The annual cut averaged about 30 million board feet during the 10-year period ending in 1927, 16 million for the next 10 years, and 73 million for the decade ending in 1947. The heaviest cut on record was 300 million board feet in 1909. Over 200 million board feet of lumber worth 14 million dollars was harvested during 1943 and 1944. About one-fourth the value of the lumber was paid to forest owners, and the remainder expended locally for logging, hauling, and milling.



Southern Appalachian blister rust control region

Most of the white pine now found in this region is young growth. In the last 20 years over 1.5 million white pine trees have been planted each year by public and private agencies. Where seed trees are present, hundreds of thousands of small white pines are growing in association with less valuable hardwoods, and natural seeding is occurring on thousands of acres of abandoned farmlands. These young trees will provide timber crops for the future, but control of blister rust, insects, and fire, and the application of other good forestry practices are necessary to obtain a sustained yield of this valuable lumber.

Timber owners know that even a few good white pine trees per acre, mixed with trees of lesser value, often make the difference between a profitable sale and no sale at all.

How Blister Rust is Controlled

Blister rust is controlled by removing ribes bushes within 900 feet of white pines. Trained workers systematically search selected white pine areas to locate and destroy these rust-spreading plants. The men work alone or in small groups. From one to three or more workings are required to eliminate ribes from infested sites.

Blister rust is more easily controlled in the southern Appalachians than in other white pine regions, because there are fewer ribes bushes. They usually grow well in moist sites at high elevations, on western slopes, along rocky banks, and near streams. They seldom grow in dense shade, and large areas are free of these plants. Fully stocked stands provide enough shade to help suppress ribes.

The species of wild ribes found in this region are the smooth gooseberry, the prickly gooseberry, the Stone Mountain gooseberry, the Missouri gooseberry, and the skunk currant.

What Has Been Done

Blister rust is under control on over nine-tenths of the white pine area in the southern Appalachian region. More than 7 million acres of land have been examined for ribes, and 35 million of these bushes have been found and removed at an average cost of

about 45 cents an acre. These accomplishments are the result of co-operative work by forest owners, local organizations, and State and Federal agencies.

What Remains to be Done

Areas freed of ribes must be watched for forest disturbances, such as those caused by fire, logging, and windfall. These disturbances create conditions favorable for germination of seed and growth of ribes. When ribes plants appear on such areas, they must be found and removed. Federal and State quarantines must be enforced to prevent areas cleared of ribes from becoming reinfested through planting and escape of cultivated bushes.

Ribes bushes are still present in white pine areas totaling over 400,000 acres. They must be destroyed to make these areas safe for the production of white pine.

How You Can Help Control Blister Rust

Be sure white pine planting sites are free of wild and cultivated ribes.

Do not plant ribes near white pine.

If you have a white pine stand that has not been protected from blister rust, see your County Agent.